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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,899	10/04/2005	Ritsu Miura	L9289.05184	6262
52989 7590 05/03/2007 STEVENS, DAVIS, MILLER & MOSHER, LLP 1615 L. STREET N.W. SUITE 850 WASHINGTON, DC 20036				
			EXAMINER FUTEL, GAYLA S	
			ART UNIT 2609	PAPER NUMBER
			MAIL DATE 05/03/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/551,899

Applicant(s)

MIURA, RITSU

Examiner

Gayla Futel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-8 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/04/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: The patent documents listed on page 6, lines 12-17 should be listed within the parentheses on page 3, lines 14-15.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Taniguchi et al. (US Patent No. 5,999,830).

4. Regarding claims 1 and 7, Taniguchi et al. teaches a nonlinear element that amplifies (**Fig. 2, #152**) an input signal; a control section that controls a voltage or current supplied to said nonlinear element (**Fig. 2, #5**); and a selection section (**Fig. 3, #52**) that selects timing (**Col. 7, lines 26-30; timing deciding circuit sends a reset signal to the counters**) at which said control section causes a set value of said voltage or said current to make a transition (**Col. 7, lines 48-52; counters control the switches**). The control unit will cause a transition of the voltage or current in the nonlinear element that amplifies since the control unit operates the switches that determine whether or not the amplifier would be active. Since switching is a step

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function, this is considered nonlinear and can be used for a signal that has a plurality of channels whose inter-slot boundary arrival times that do not coincide are multiplexed.

5. Regarding claim 2, Taniguchi et al. teaches the nonlinear circuit of claim 1 as stated above. Taniguchi et al. further teaches the selection section (**Fig. 3, #52**) selects timing at which said control section causes said set value of said voltage or said current to make a transition in synchronization with an arrival time of an inter-slot boundary (**Col. 7, lines 26-30; the timing deciding circuit sends a reset signal after determining the time slots have ended**).

6. Regarding claim 4, Taniguchi et al. teaches the nonlinear circuit of claim 1 as stated above. Taniguchi et al. further teaches in a transient period (**Col. 8, lines 9-14; frequency counter taking consideration of time needed for variations**) until said voltage or said current actual supplied to said nonlinear element reaches said set value said selection section does not select said timing (**Col. 7, lines 63-67; timing of the frequency counter**) for causing said set value to make a transition (**Col. 8, lines 50-52; reset signal is not sent until completion of time slot period**).

7. Regarding claims 5 and 8, Taniguchi et al. teaches the nonlinear circuit and amplification method of claims 1 and 7, respectively, as stated above. Taniguchi et al. further teaches that a generation section (**Fig. 3, #51**) generates a trigger that causes said selection section to select said timing (**Col. 7, lines 40-48; CPU triggers the timing deciding circuit, which in turn sends the reset signal to the counters**).

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8. Regarding claim 6, Taniguchi et al. teaches the nonlinear circuit of claim 1 as stated above. Taniguchi et al. further teaches a radio communication apparatus equipped with the nonlinear circuit (**Fig. 2; Col. 6, line 66-Col. 7, line 1**).

### ***Allowable Subject Matter***

9. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Akamine et al. (US PG Publication No. 2003/0064696)
- Lehtinen et al. (US Patent No. 5,675,611)
- Afrashteh et al. (US Patent No. 5,426,641)
- Takahashi et al. (US Patent No. 5,724,651)
- Bussan et al. (US PG Publication No. 2003/0153368)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gayla Futel whose telephone number is 571-270-3008.


The examiner can normally be reached on Mon-Thur 7:00 am - 5 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GF

  
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